

Philae comet probe: World prepares for final farewell

February 3 2016, by Mari ette Le Roux



A model of the European Space Agency's robot craft Philae is seen at the Cite de l'espace in Toulouse on November 12, 2014, the day Philae began a 20km descent toward the Churyumov-Gerasimenko comet after being launched from the space probe Rosetta

In November 2014, a brave explorer on a daring mission strapped on a pair of studded boots and a hard hat, stuffed a cheese sandwich and a compass into a backpack, and leapt from a spacecraft.

After a seven-hour freefall, our protagonist touched down on a comet and became a hero back home, where Earthlings followed his every tweet, collected [soft toys](#) in his likeness, and fretted when he fell silent.

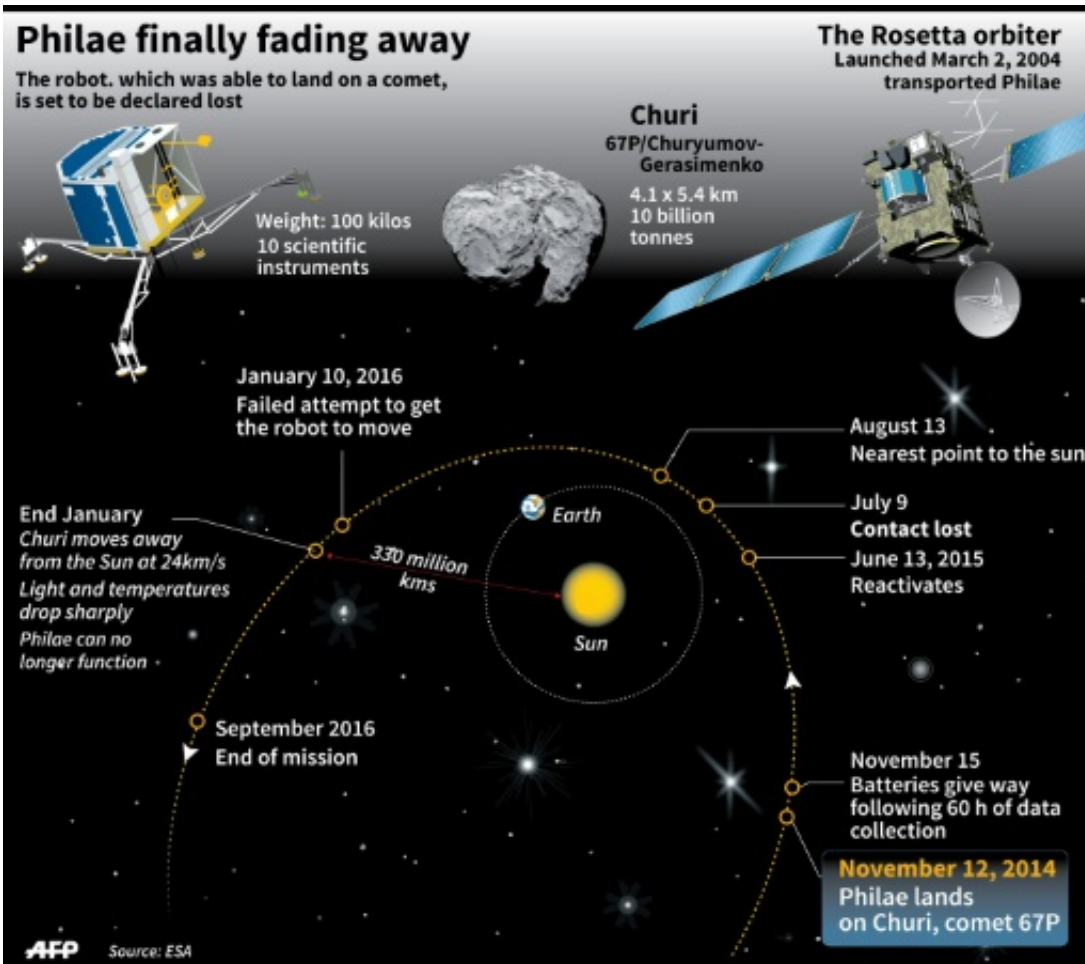
For all the warm human emotion he evokes, our daredevil adventurer, Philae, is a cold metal box the size of a washing machine.

Twitter and Youtube turned the robot lab into a cartoon hero with human qualities—an intrepid little boy who dozed off after an historic mission to probe a comet zipping through space.

But the success of the campaign to humanise a scientific instrument has left the European Space Agency (ESA) with a dilemma: how to communicate Philae's demise?

"When finally we 'kill' Philae, it will be like 'who killed Bambi'," ESA senior science adviser Mark McCaughrean told AFP in November last year, when ground controllers started considering when, and how, to draw a line under the lander mission.

Philae is perched on comet 67P/Churyumov-Gerasimenko, now some 340 million kilometres (211 million miles) from the Sun and speeding further away.



Chronology of the Rosetta and Philae mission with data.

"We're going to get accused... of abandoning the poor little boy," said McCaughrean.

Scientists have said that by January 2016, 67P will be too far out for rejuvenating rays to reach Philae's solar panels ever again.

January has come and gone without any announcement.

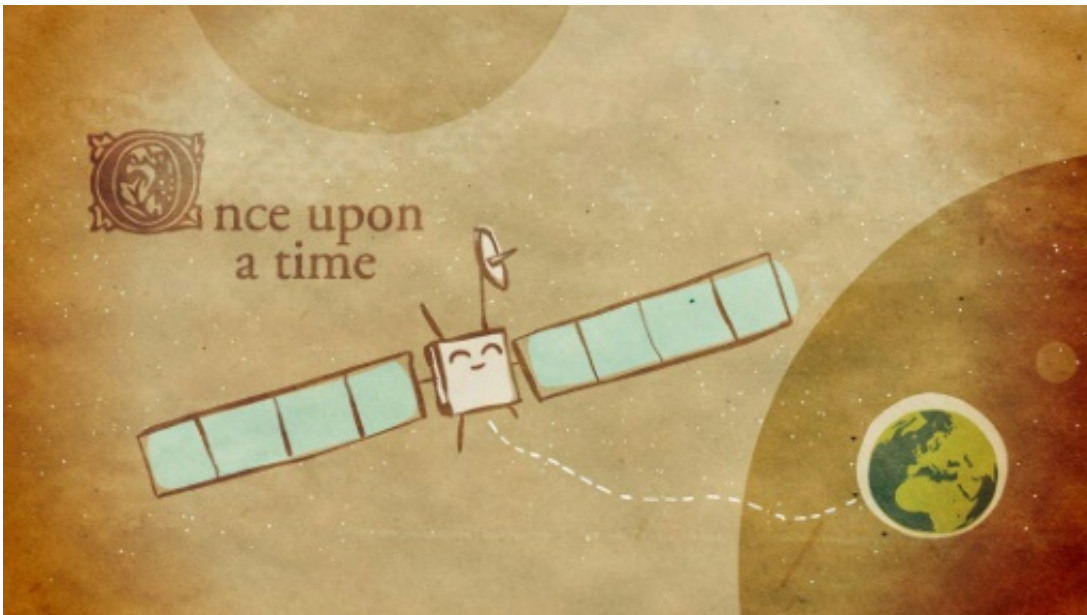
"That's a really difficult question, how to kill this character that people have taken to love," said Sebastian Marcu, founder of Design & Data,

the agency that drew the ESA cartoon.

Little brother

In a first for space exploration, Philae was dropped onto 67P's surface on November 12, 2014 after a 10-year, 6.5-billion-kilometre (four-billion-mile) journey through space, piggybacking on mothership Rosetta.

The feat was followed by adults and children around the world, many enthralled by the media campaign of animated cartoons and Twitter chitchat between the duo.



An illustration by cartoonist Carlo Palazzari of the European Space Agency's (ESA) 'Philae' cartoon character, conceived by the ESA as a way to generate public interest in its programmes

In the videos, Rosetta and Philae are hand-drawn as a small box and a bigger one, with dots for eyes and pen-stripe mouths with which they express joy, affection, surprise, fright and trepidation.

Imbuing objects with human qualities is called anthropomorphism—a tried-and-trusted marketing technique.

In the case of Philae and Rosetta, it seems to have worked wonders to build public backing for a costly, taxpayer-funded endeavour.

"Time and time again when a space mission didn't go as planned, the media was very quick at saying... 'We could have built so many schools for it, and so many hospitals for it'," recalled Marcu.

"In this mission... we have managed to create this empathy amongst the general public for the well-being of a metal box... They really didn't question the money aspect of it."

The videos portray Philae as Rosetta's smaller "brother", riding on her back through space, his thin little legs dangling across her forehead.

At some point on the long journey, Philae jumps up and down like a bored child on a road trip, exclaiming: "Are we there yet? Are we there yet?"



The National Centre for Space Studies (CNES) president Jean-Yves Le Gall (L), French President Francois Hollande and French astrophysicist Francis Rocard looking at a model of Rosetta lander Philae, in 2014

There are even childhood "photographs" of the pair, Rosetta sucking a pacifier, and Philae riding a tricycle, long before their careers as space explorers.

Then, on arrival at 67P, the pair separate after 10 years together.

Philae puts on his boots, tests his flashlight and loads his backpack, which has an "I love Earth" patch sewn onto it.

'I'm tired'

There is a sad glance, a hug, then Philae jumps.

The cartoons depict Philae's bumpy landing, bouncing off the comet's craggy surface several times before ending up at an angle in a shaded crevice.

It spent 60 hours sniffing and prodding the comet, and sent home invaluable data before its batteries ran flat.

Just before it went into standby mode, Philae tweeted "I'm feeling a bit tired", followed by "zzzzz". In the video, the robot is asleep on a mat, under a green blanket.

"We're kind of guilty because we created this kind of sentimental opinion: Philae is a little boy and he's shivering on the surface," McCaughrean said of the public concern for the lander's welfare.

Then on June 13 last year, as the comet and its precious charge drew closer to the Sun, Philae's power pack was recharged and it woke up, tweeting: "Hello Earth! Can you hear me?"

After eight broken calls to Earth, Philae fell silent again on July 9, and hasn't been heard from since.

There are discussions on how to "close the story", said Marcu—also for Rosetta's scheduled crash landing on the comet in September, joining Philae at the mission's end.

"Anthropomorphism does carry the risk that although it can conjure euphoric emotions like joy and excitement, it can also cause stress or dysphoric emotions like grief," a Indiana-based philosophy professor Grant Ramsey told AFP of the campaign.

"If something is alive, then it will eventually die, and it is difficult to avoid the distress of death."

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